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**SUSAN MOREY**, Texas State University  
*Cores and Reductions of Edge Ideals of Graphs*

There is a natural one-to-one correspondence between square-free monomial ideals generated in degree two and graphs. Using this correspondence, properties of a graph can be used to give algebraic information about the corresponding edge ideal. This talk will describe how, in recent joint work with Louiza Fouli, we have used combinatorial information from the graph to limit the possible formats that minimal reductions of the edge ideals can have. For special classes of graphs, the combinatorial information about reductions, together with the equations of the fiber cone, will be used to give a formula for the core of the edge ideal.